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THE JOURNAL OF SCHOOL HEALTH

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Vol XIV NOVEMBER, 1944 No. 9

PHYSICAL CONDITION OF SOLDIERS AT INDUCTION WHAT THE SCHOOLS MIGHT DO TO OVERCOME DEFECTS SHOWN*

HENRY F. MACE, M.D.

State Department of Education, Albany, N. Y.

A sampling was made of the results of the examination of applicants for entrance into the army to determine the incidence of disqualifying defects in the different age groups. The age groups are divided into the 18-19-20 group, those 21 to 25; those 26 to 30; the 31-35 and that group 56 and over.

Of the 15,000 examinations in New York State Selective Service studied 17 per cent of the individuals were in the first or 18-19-20 year old group. The largest group was the next or 21-25 year group which constituted 30 per cent of the entire number.

Six per cent of the 18-20 group as compared to eight per cent of the whole group had visual defects of sufficient severity to be disqualifying, but only twenty-five per cent of those found with defective vision as a major defect were rejected.

In the public school pupils we find about eight per cent of those tested each year are either new cases or uncorrected cases previously found. These cases run from 20/30 on. The average percentage of treatment secured for these cases is from 70 to 80. Many of these pupils with a vision loss of 20/50 or worse in the better eye after treatment have the opportunity of a sight saving class. More such classes are needed. When we mention prevention for defects of vision the avenues of approach are numerous, such as natural and artificial lighting both at school and at home, the amount of home study a pupil is required to do, with no thought of the conditions under which he has to do it. Another factor is the extra curricular strain upon the eyes such as movies, extra reading, insufficient sleep, poor nutrition or poor posture. When we look about us we will find many ways in which better vision might be secured or maintained. Some of the sources of poor vision to a handicapping extent are neglect of infectuous conditions and the

*Read before the American School Health Association—October 2, 1944.

failure to give attention to the early signs of failing vision even though they are reported to the parents. There are of course some types of defective vision, congenital and otherwise, for which nothing can be done other than adjustment of program and supervision.

Defective hearing to the extent of disqualification was discovered in 2.7 per cent of the whole number examined. Eighty-one per cent of them were rejected. In the public schools all pupils are required to be tested annually by the group phono-audiometer and those found with a definite hearing loss are retested by a pitch range audiometer to determine the exact hearing loss. An endeavor is made and every effort used to get those cases of a definite hearing loss to an otologist in order that the exact status may be found and treatment, if any, instituted. In the schools every possible adjustment such as seating and special attention is made. Lip reading classes are available where there is a sufficient number requiring such help. Here again we could do more. Many children who should be in a lip-reading class are not able to because of distance to be traveled. Deafened pupils who have had the advantage of lip-reading instruction are able to continue in their regular school classes and are helped to realize that their position in social life is more pleasurable and secure. More opportunity must be given to these deafened children. More lip-reading instruction either by more classes or more itinerant teachers or, better, both. It would surely be possible to prevent much of the deafness by adequate attention to early symptoms. Means should be provided for earlier diagnosis and facilities for otological care for all beginning cases.

Dental defects as a disqualifying cause have been very much minimized. Only three men were rejected because of this defect.

Less than one-half of one per cent of the men were rejected because of a throat condition.

Four hundred twenty-eight or 2.8 per cent of the 15,000 examined were classified as having tuberculosis or a lung condition of a disqualifying degree. The incidence of this cause was fairly equally distributed throughout all the age groups.

The rejections for cardio-vascular defects amounted to three per cent of the entire group or about two per cent of the total number of defects found. In the public schools the finding of cardiac conditions is about one per cent. Most of these cases are irremediable and the school program, for them, has been modified according to the necessity of each case. The rate of incidence in the selectees examined mounts rapidly from the younger to the older age groups.

Hernia—3.8 per cent were found to have hernia and 86 per cent of those found were rejected. Nine of those found were in the 18-19-20 year old group and from these the findings increased gradually to 25 per cent of the total number found in the 29 year old group. In the schools there must be a closer investigation for hernias. There should be no untreated cases on the school records. Nearly all the cases found in the schools are congenital and very few acquired.

The rejection for mental causes was the next highest of all causes. The incidence ranged from three and one-half per cent in the lower age group to ten per cent in the higher age group. There is still evidence that there must be greater emphasis on mental hygiene and much more guidance in all groups.

In the musculo-skeletal group 690 of the 15,000 were found to be defective to a disqualifying degree. This was 4.6 per cent of the total group. These cases were orthopedic, paralytic and other obvious causes. For these cases probably little could be done since they did not come under the remediable class.

This analysis shows us several things.

There is much that should have been done in the way of health supervision and a continuous health supervision. The 18-19-20 year olds show a much lower rate of defects than do the older age groups. Even in the lower age group some of those (undoubtedly a majority) have been away from any health supervision whatsoever for from two to five years. Much can happen in that time and we realize too that some things will happen that health supervision will not prevent. While health supervision has a part in the life benefits of these young men there must be something else. There must be facilities for advice, treatment and adjustment procedures that will not be denied because of the economic status of the individual.

Because of the tendency to charge against the schools many of the 30 per cent rejections of selectees the superintendent of one of our city schools made an analysis of the number of rejections of boys of 18 who had just graduated from High School and the cause of rejection.

The investigation concerned six high school graduating classes from 1939 to 1944.

"The total number of boys graduated in these classes was 353. But 42 of these were under 18 at the time of investigation and were never examined. Thus 311 boys were finally examined for induction into the service. Of these, 284 were accepted or 91% of the total. The percentage of rejections, therefore, was 9. It is interest-

ing to note that in the classes of 1939 to 1942 whose physical education facilities were limited, 208 were accepted out of 223 or 93%, and of the two classes 1943 and 1944 who had much better physical education facilities 76 were accepted out of 88 or a percentage of 86. I do not think that this indicates that improved physical education facilities necessarily would result in a higher rate of rejections but it does indicate that physical education training perhaps has much less to do with rejections than has been usually thought."

To guard against the possible identification of any individual the 27 rejections among these 311 boys were arranged in five categories as follows:

"1. Seven of these were cardiac cases, mostly organic, although some of them may have resulted from severe attacks of childhood disease.
2. Seven rejections were because of crippling diseases or accident including results of infantile paralysis, diabetes, tuberculosis.
3. Five were rejected because of serious faults in vision. All of these cases were understood by the school and all had been corrected as far as possible by glasses long before examinations were given.
4. Four were rejected because of the injury or puncture of ear drums or extreme deafness. All of these cases were the result of childhood diseases.
5. There were four cases I include under the general heading of psychoneurosis."

The history of most of these cases was known or available on the school records. Almost all of them except the neurotic cases occurred before the boys ever entered high school. "In some cases the defects could definitely be traced to home conditions where lack of proper nutrition, medical attention or psychiatric care contributed."

It is quite evident that the rate of rejection of boys who have been under the school health program until they reached 18 was very much less than the general average, that boys who have had the benefits of the school medical service were in much better condition than those who had not these benefits.

There still remains something to be done to secure and maintain an optimal health status. In New York State the annual examination, the notification of parents of defects found and follow-up service, the health education and physical education programs have proven their usefulness.

The whole school health program must be so thoroughly instilled into these pupils that when they become parents they will make every effort to provide for their children a satisfactory environment, adequate living conditions, and to secure early and proper medical attention by an intelligent use of the medical facilities in the community.

In other words, we must educate these pupils not alone to be healthier school children, but to be better able to undertake the parenthood they will assume later. They must be given the incentive to secure for their children and the community a better opportunity for efficient and joyful living than they themselves have had.

These questions arise:

Can we secure for our youth an optimal physical condition without first removing as far as possible all physical and mental handicaps?

Should we do more in so far as physical training is concerned than to give them an adequate muscular training that will prepare them to undertake successfully any additional training they may be obliged to undergo?

Must we provide more facilities for the treatment of defects.

Isn't it essential in the light of recent findings that we give much more attention to the mental hygiene of our training of both boys and girls and give them much more mental guidance than they have had?

These problems are not alone school problems.

The training, supervision and treatment must begin before school days and continue for years after the individual has left school if we expect the members of our communities to enjoy the most that is in life. The answers to these problems must come from all of us.

* * * * *

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A METHOD OF APPROACHING THE HEART DISEASE PROBLEM IN THE SCHOOLS*

J. G. FRED HISS, M.D.
Syracuse, N. Y.

At the present time there is a great deal of confusion regarding the proper method of handling children with *cardiac signs or symptoms* in the schools throughout the Nation. The pendulum of opinion has swung first to segregation of all such children in special classes or schools and then to the opposite extreme of condemning such segregation in its entirety. Both points of view are probably extreme and as usual the truth very likely lies between them. As you know, the problem of heart disease in children is essentially the problem of rheumatic heart disease. One can say that roughly 95% of school children with organic heart disease are afflicted with the rheumatic type of heart disease. The problem of rheumatic heart disease is not an easy one because there is still so much about this disease that is unknown. However, in this connection there seem to be two definite objectives of a School Health Service.

First: there is the need to determine whether the rheumatic disease is active or not. If it is active, the child should not be in school although it may be able to continue its education while under treatment of its own physician, at home or in a convalescent home.

Second: if the disease is inactive there is need of an accurate evaluation of the cardiac damage so that proper educational and vocational guidance may be given. To accomplish these aims a good clinical knowledge of rheumatic fever and of clinical cardiology are essential. Some school health services, have, therefore, employed pediatricians and cardiologists for this purpose. Their methods of functioning vary greatly.

I greatly appreciate the opportunity of presenting to you the method of approaching this problem in the City of Syracuse, New York. The population of the City is about 225,000. There are two school systems; the public school system with about 27,000 pupils in forty-seven grade and high schools, and the parochial school system with about 7,000 pupils in sixteen grade and high schools or about 34,000 pupils in the combined schools systems. Each system has its own health service but they are headed by a common full-time Director. The larger system has in addition thirteen part-time school physicians while the smaller system has three part-time physicians or approximately one part-time school physician for every 2,000 pupils. There are also, at the present time, one ortho-

*Read at the Annual Meeting of the American School Association, New York, New York, October 2, 1944.

pedist, one ophthalmologist, one psychiatrist and one cardiologist. There is in the public system one special school to which the handicapped from the entire City may be sent. It also takes care of the normal children from its immediate neighborhood.

A cardiac classification clinic is being equipped at one of our hospitals through the generosity of the Syracuse Post of the American Legion. This will furnish fluoroscopic, electrocardiographic and laboratory facilities for the use of the two school systems as well as for a four-County rheumatic fever program with Syracuse as a center.

School physicians try to examine every child every year. Parents are invited to be present, but less than 5% accepted this invitation last year although an equal number later conferred with the examiner concerning defects found. When defects of any kind are found parents are notified by a note and asked to consult the family physician or clinic if unable to pay a physician. Formerly parents were also notified by this method of any heart abnormalities. Because of many unfavorable reactions this was discontinued and instead a nurse was sent to acquaint the parents of any heart abnormalities found. This reduced definitely the number of "anxiety" reactions.

At present this practice too has been discontinued. Instead, when one of the school physicians finishes a school he notifies the cardiologist and then they arrange to meet at his school. Together they re-examine *all* children in whom he has found some cardiac abnormality or who have had any illness that might result in cardiac damage. Frequently children who have a poor attendance record are also included. The school nurse is usually able to give valuable information about the home, the parents, the siblings, the family physician, etc.

To date, parents have *not* been notified of this examination or been invited to be present. I will admit that this plan or attitude is seriously questioned by some physicians who are very familiar with school health problems and policies. At this time I shall give only two reasons for my stand on this point. First: I feel strongly that all medical contact with the family should be made only by the school physician and not by any of the special consultants. I feel that it is most unfair to imply by word or action that the school physician (who in this case is also in private practice) is incompetent when it comes to ordinary bone, eye, ear, heart, lung and other examinations. I am sure that such a general impression will prevent the attraction of the better trained man to school health services. If we are to make any progress in school health, we must

insist that the school doctor, just like the public health officer, be a physician with some additional training and qualifications and that he be able to make all the special examinations that occur with any numerical frequency. At the same time we must let the public know by our actions that the school physician is a specially trained physician with whom they can discuss all the medical problems peculiar to the school child. A second reason for not notifying parents of this consultation is that we examine in this way all children with cardiac abnormalities. Most of these children are private patients of other physicians in the community and some would quite properly resent having a cardiologist explain the child's condition to the parents. In a City the size of Syracuse many people know the cardiologists by name as well as the nature of their work and would expect a complete report of a child's cardiac status as well as expecting a detailed outline of treatment. It might be somewhat embarrassing for the cardiologist to refer the parents back to the family physician for this information even though he be a very well trained practitioner. The school physician would find it very much easier to make this reference.

Obviously when our cardiac classification center is in operation it will be necessary to inform parents of the proposed examination and to get their legal consent for making this additional examination so that the child can be more accurately classified. In most instances, especially in the case of smaller children, a parent will accompany the child to the center. But it is planned to have the school physician present when the children from his schools are thus examined and to encourage him to do most of the talking to the parent. The consent blank will contain the offer to transmit to the child's physician any positive findings discovered if the parents wish it and will write in the physician's name. This is the policy already followed in connection with chest x-rays of school children in our City. To repeat, in other words, every effort will be made to preserve the relationship between the school physician and the child and parent on the one hand and the private physician and his patient on the other.

Let us return to the consultation of the school physician and the cardiologist in which all the children with cardiac findings are examined and discussed. They are classified according to the "Nomenclature and Criteria for Diagnosis of Diseases of the Heart" of the New York Heart Association, modified to fit our particular needs. I shall cite only our "therapeutic" or recommendation classification. In place of the five groups in the book namely, no restriction, slight restriction, moderate restriction,

marked restriction and total restriction of effort, we use ten groups each indicated by a number as follows:

0 No restrictions of any kind.
1 Allow all gymnastics but not competitive athletics.
2 Mild gymnastics only.
3 No physical exercises.
4 Rest periods in school, restriction of recess activities. Open air class if available in school.
5 Percy Hughes School.
6 Parents to be asked to furnish transportation to and from school.
7 Home teacher.
8 Convalescent home.
9 Special recommendations.

If the result of the consultation is that there should be no restriction of the child's activities (and this is by far the most common recommendation) *no* notice is sent to the parents. (Why run the risk of causing an anxiety reaction in the parents with possible unfavorable secondary reaction on the child if we have a condition which requires no restriction?) If, however, we feel that a child not already restricted needs restriction or visa versa, or if we find signs suggesting rheumatic activity two courses can be followed. The favorite plan is to have the cardiologist phone the child's private physician and discuss it with him and allow him to discuss it with the family. This approach again preserves the private physician-patient relationship and makes the physician more anxious to cooperate with the School Health Services. (In fact I have had several private physicians reverse the process and contact me to tell me about a "cardiac" child.) This is of tremendous help especially in the child who has recently had rheumatic fever but has no cardiac signs.

The other course is to notify the parents that some abnormality is suspected and that the child should be taken to his doctor. This plan is chiefly used in connection with clinic patients.

Children are usually not restricted if they have merely a tachycardia or a mitral systolic murmur, even if organic, without enlargement and without a history of recent activity. Children with other murmurs, but without enlargement, are only slightly restricted. Frequently only permission to engage in competitive interscholastic athletics is denied. When there is only slight enlargement strenuous gymnastics are forbidden, while with marked enlargement the child is excused from all gymnastics.

Most children are kept in regular classes in their nearest school. As stated earlier we do send some children to the School for Handicapped Children where they are in classes with other handicapped children as well as some normal children. There are no classes exclusively of "cardiac" children. Most of the cardiacs are taken to and from school by the school bus. There are no arbitrary rules for transfer to this special school. Each transfer to this school is considered on its own merits.

Most common reasons for admission to the special school are:

1. Recent "rheumatic" activity with or without heart damage. The transfer of a child of this group frequently is determined by the distance of the child's home to the regular school, the nature of the intervening terrain, and the inability to obtain transportation to the regular school if the distance is great.
2. *Paradoxically,* many children sent to this special school have no organic heart disease at all or have organic heart disease that requires no restriction, but these children are suffering from an invalid reaction or inferiority complex brought on by over restriction by the parents because of over anxiety or misinformation. These children are either not restricted at any time in this school or their restrictions are removed gradually depending on the severity of the mental reaction. Incidentally I feel that this is the most valuable use of a well run special school in the treatment of children with cardiac conditions, real or assumed.
3. A small group of advanced cardiacs who could not go to a regular school because of physical reasons, chiefly distance from school, hills, or many stairs in the school building.

Every effort is made to return the first two groups to their regular schools as soon as possible, usually at the end of one or two years.

As soon as it is felt that a child's cardiac condition is such that there should be some degree of permanent restriction of activities, his name is given to the teacher in charge of vocational guidance. He then tries to direct the child into some line of endeavor compatible with his physical condition.

We are hoping to have a well equipped convalescent home in the near future to which we can admit subacute cases of rheumatic fever. In this home, the child's education can be carried on by teachers assigned by the Department of Education so that when the child has recovered enough to go to school he shall be with other classmates of his own age.

In conclusion the purposes of the plan described can be stated as follows:

1. To find and list as soon as possible all the school children who have cardiac disease, signs or symptoms or who have had a disease that may lead to heart disease.
2. To standardize the diagnostic methods and terms used by the school physicians.
3. To admit to special classes only children who can be expected to benefit from such special classes, and to keep children in these special classes only as long as they can benefit from them.
4. To control the amount of restriction prescribed for children with heart disease in accordance with the latest scientific knowledge. It has been almost a universal practice to over-restrict the child with heart signs.
5. To arrange educational and vocational guidance for that small number of children with heart disease that need such guidance.
6. To collect facts and reliable statistics for research purposes.

* * * * *

Helen Ahrens Cary, A.B., M.D., newly chosen as President-Elect of the American School Health Association.

Academic training—University of Washington.

Medical training—University of Oregon, Class of 1921.

The following year, internship at Women's and Children's Hospital, San Francisco.

Medical Advisor of Women at Reed College, Portland, Oregon, 1923-24.

Health Consultant for four summers in the summer sessions of the Indian Service Summer Schools.

Appointed to present position as Director, Division of School Hygiene, Portland Bureau of Health, Portland, Oregon, Sept. 1924.

At that time the staff included five full-time nurses and part-time medical director. It has been increased to a staff of 24 staff nurses, two supervisors, an office nurse, stenographer, four part-time physicians, and an eye, ear, nose and throat consultant. The work has grown from that of purely inspection of children for evidence of communicable diseases to a full-time health service for school children, including control of communicable disease, immunizations, physical examinations, consultation with parents, principals and teachers, follow-up for defects, special audiometer testing programs, crippled children, and follow-up of school children contacts of tuberculosis. It also includes supervision of physical examinations for participation in competitive athletics. The school health services are extended to public and parochial schools, including nursery schools, elementary schools and high schools.

Dr. Cary is the first woman to be chosen for this position, election to which automatically carries promotion to President of the Association a year hence.

S. B. McPheeters, M.D., President-Elect for 1943-44, becomes President for 1944-45. A sketch of the background and experiences of Dr. McPheeters appeared in the Journal of December, 1943.

PRELIMINARY REPORT ON "WHAT DOES A SCHOOL SUPERINTENDENT EXPECT OF A SCHOOL NURSE?"

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Shortly after the first of the year our president, Dr. Sellery, asked me to act as chairman of a new committee on problems pertaining to school nursing. The following nurses consented to serve with me: Miss Anna M. Neukom of the State Department of Education at Albany, New York; Miss Rose E. Krug of Aurora, Illinois; and Miss Eunice Lamona, supervising nurse of the Los Angeles Public Schools.

The first problem confronting the committee was to determine the field in which we should be active. It was agreed that we would have to work almost entirely through correspondence. After some thought and study of what had been done in this field, it was decided to make a sample survey, if we could find the funds, and ask superintendents of school systems why they hire nurses and what they expect of their nurses. The purposes of the questionnaire are stated on the form sent out. Superintendent McCombs of the Des Moines Public Schools agreed to use part of his budget on informational service to make this study.

Five hundred of the questionnaires were mailed out by the committee members. Approximately 325 were returned, of which 301 were sufficiently complete to use in the statistical compilation. Of this number, 241 were filled out by the superintendent of schools, 14 by medical directors, 9 by nurse supervisors, and 5 by non-medical directors of health departments. Several of the questionnaires which were returned could not be used in the compilation, but did contain some rather pertinent statements relative to problems with which school nurses should be concerned.

As statisticians go over the figures they will find several places in which the figures do not balance. This is due to incomplete information. The purpose of the questionnaire was not statistical, so if a questionnaire gave a portion of the information asked, it was included in the compilations.

In selecting schools to survey, all of the committee sent the questionnaires out at random wherever we could get the names of

Presented to the American School Health Association, October 2, 1944.

the school superintendents. Except in the states of New Jersey and New York, we were unaware as to whether these school systems had nurses or not. From the returned questionnaires we find that less than four per cent of the schools surveyed did not employ nurses, and only ten per cent used nurses from the official health agencies. Of the approximate thirty per cent not reporting, we must assume that a large per cent either did not employ nurses or were serviced through the official health agencies.

We would like to call to your attention two or three places in the data which will bear some thinking from all groups concerned with school health problems. From the information concerning medical direction for nurses, it is interesting to note that 140 school systems have either full-time or part-time physicians on their payroll, and 29 schools which employ nurses use the official health officer as the school medical director. Only 80 schools report no physician appointed to assist in the health program or in directing the nursing activities. Several of these systems stated a desire to have medical direction if their budgets would permit. More than half of the schools which reported a physician employed by Boards of Education are located along the Atlantic seaboard. This is accounted for by the fact that New York, Pennsylvania, New Jersey, and perhaps other states have laws requiring medical inspection of school children. Several of the schools reported that physicians are members of the Board of Education and in that capacity are able to give some medical direction to the school health program. This is a policy which has every chance to breed distrust between school superintendents, nurses, and other school board members.

The number of children each nurse is expected to serve should have further study by the committee, although the N.O.P.H.N. has done much along this line. The N.O.P.H.N. has set the standard of 1,500 as a satisfactory pupil load, and the reports of this survey show great variations in this number. However, for the present, this committee will probably do little with this problem.

A committee on School Nursing Policies should be greatly concerned about the problem of nurse supervision. Excellent work is also being done on this problem by a committee of the N.O.P.H.N. It is quite evident from the survey data that the larger part of the supervision of school nurses is given, if at all, by the superintendent of schools. This does not mean that the superintendent is prepared in his understanding of nursing problems to do this nor does the survey indicate that there are any great number of well prepared nurses employed in the schools. Only 181 of the school sys-

tems require special preparation of the nurse and this preparation varies from six semester hours to a B.S. degree.

Of the superintendents answering the question as to what further preparation they would recommend for their nurses, 64 gave a very vague answer or frankly admitted they did not know.

In answering the question as to why they hire nurses, they are much more positive in their statements. The figures in themselves do not tell the entire story. The manner in which the question was answered tells even more. It is quite evident that superintendents are concerned with similar problems to those in industry. These lie in the field of disrupted school programs from ill health, inferior physical status, and social problems which retard educational progress. The superintendent is perhaps a bit more concerned than is industry, with the value of a health education program closely tied in with the school health services. This apparently accounts for the large number of schools who want their nurse to share in a health promotion program.

Our committee should make further study of this material in several fields. One such study should be concerned with the duties expected of the nurse and the types of preparation school superintendents think would best help her to render this service. This does not mean that the opinion of the superintendent is always correct, but if it isn't, how can he be informed of a better program and a better type of person to carry on such a program?

However, the opinion of a school superintendent about what he wants in the way of health services for his school is highly important. In the years to come, which will no doubt be years of transition in our thinking, in our planning, and in the execution of new and better ways for community health, the school superintendent will also be thinking and planning accordingly for better child health and ways to get it.

School administrators apparently would welcome a clear-cut statement of the health functions they are expected to assume, providing they were given assurance that other child health problems were adequately met by other community agencies. The school administrator deserves the help and counsel of health specialists, but more, he deserves to be able to find personnel adequately prepared to guide and execute his health program.

The nurse who works in a school is in need of better preparation for her functions, more fundamental understandings of school philosophy, and better orientation into the organization she is expected to serve.

Eventually, leaders in the health field, in cooperation with other agencies concerned, must be able to define quite accurately the different areas of responsibility for the various community organizations and then, under some such a planned program, help to prepare workers for the fields outlined.

PRELIMINARY REPORT OF FACTS FOUND ON QUESTIONNAIRE "WHAT DOES A SCHOOL SUPERINTENDENT EXPECT OF A SCHOOL NURSE?"

(301 Services Representing 1853 School Nurses)

Cities of		2,500 to 9,999						10,000 to 29,999						30,000 to 99,999						Over 100,000						
		Midwest	South Central	North Central	Pacific	Atlantic	Total	Midwest	South Central	North Central	Pacific	Atlantic	Total	Midwest	South Central	North Central	Pacific	Atlantic	Total	Midwest	South Central	North Central	Pacific	Atlantic	Total	Grand Total
No Nurse Service		0	0	0	0	0	0	2	5	4	0	0	11	0	1	0	0	0	1	0	0	0	0	0	0	12
One Nurse		13	–	1	–	15	29	31	3	17	6	10	67	1	2	2	0	0	5	0	0	0	0	0	0	101
Two Nurses		0	–	0	–	3	3	9	0	6	5	15	35	3	0	6	2	3	14	0	0	0	0	0	0	52
Three or More Nurses		0	–	0	–	0	0	2	0	2	0	7	11	4	1	13	9	27	54	7	6	4	9	13	39	104
Nurse Supervisor		0	–	0	–	2	2	7	0	3	1	6	17	4	0	8	5	14	31	6	4	2	6	8	26	76
Medical Director		0	–	0	–	14	14	15	3	12	7	29	66	5	2	13	7	26	53	6	6	3	8	13	36	169
No Medical Director		13	–	1	–	4	18	24	0	13	4	3	44	3	1	4	4	3	15	1	0	1	1	0	3	80
Use Official Health Service		0	–	0	–	0	0	1	0	2	3	0	6	1	1	6	2	3	13	0	1	5	2	5	13	32
Nurses Prepared*		7	–	0	–	15	22	18	2	19	8	27	74	7	1	17	9	20	54	7	4	1	9	10	31	181
Recommended Preparation	P. H. N.	4	–	1	–	6	11	16	1	8	0	1	26	5	0	9	2	6	22	4	5	1	3	5	18	77
	Education	2	–	0	–	9	11	12	1	7	7	11	38	4	1	7	5	15	32	3	1	2	4	4	14	95
	School Nursing	3	–	0	–	3	6	3	0	0	2	0	5	0	1	0	1	1	3	1	2	0	0	3	6	20
	Social Service	1	–	0	–	3	4	2	0	0	1	3	6	0	0	1	1	4	6	0	0	1	1	2	4	20
	Indefinite Answer	4	–	0	–	4	8	9	1	9	2	10	31	2	1	6	3	9	21	1	1	0	1	1	4	64
Where Get Preparation	Sure	6	–	0	–	11	17	20	1	15	5	17	58	4	2	14	5	17	42	4	5	3	6	1	19	136
	Uncertain	7	–	1	–	7	15	22	2	10	6	15	55	4	1	7	6	12	30	3	1	1	2	3	10	110
Reasons for Employing Nurses	Health Promotion	10	–	1	–	9	20	25	2	16	5	23	71	3	2	13	8	19	45	5	5	4	5	5	24	160
	Communicable Disease Control	7	–	0	–	6	13	22	2	14	7	11	56	7	2	10	6	12	37	4	2	2	7	9	24	130
	Health Inspection	6	–	1	–	7	14	19	1	8	7	21	56	2	3	10	5	12	32	3	5	1	4	6	19	121
	First Aid	3	–	0	–	9	12	8	1	10	4	14	37	4	0	7	4	10	25	4	1	1	4	5	15	89
	Truancy	3	–	1	–	4	8	6	0	4	0	5	15	0	0	2	1	2	5	0	0	1	1	0	2	30
	Home Visits	3	–	1	–	5	9	16	1	12	7	12	48	3	1	10	8	18	40	5	3	3	4	11	26	123
	Assist Health Education	4	–	1	–	6	11	5	1	8	4	13	31	6	0	12	5	11	34	4	4	1	7	8	24	100
	Teach Classes	2	–	0	–	2	4	3	0	4	4	4	15	0	1	1	2	6	10	1	0	0	0	1	2	31
Nurse Tenure or Retirement		0	–	1	–	18	19	16	3	11	7	3	40	3	2	16	10	25	56	7	4	3	7	12	33	148
Teacher Tenure or Retirement		0	–	1	–	18	19	22	3	22	9	30	86	3	2	16	11	29	61	7	6	4	7	13	37	203
Small Pupil Load		550						600						450						1200						
Large Pupil Load		2000						4500						7000 (13600)						9000						

*Preparation varies from 6 semester hours to a B.S. degree in Public Health Nursing or a related type of preparation.

To the question, "If more money were available for school health programs, how would you like to see it used?"

87 would employ physicians, or replace part-time with full-time doctors.

7 would like psychiatric services.

20 would like to increase their health education program.

Special clinics for special types of services were frequently mentioned.

This is the 1943-44 report of the committee on School Nursing Policies and Practices of the American School Health Association.

Respectfully submitted:

ROSE E. KRUG
EUNICE LAMONA
ANNA M. NEUKOM
GERTRUDE E. CROMWELL,
Chairman

RESOLUTION

The following resolution was adopted by the Governing Council of the American School Health Association at the Annual Meeting in New York City, October 2-5, 1944:

The American School Health Association feels that the marked tendency to blame the lack of adequate physical fitness upon the schools is most unfortunate and not a fair appraisal of the causes.

True physical fitness can be acquired only through a combination of heredity, the diagnosis and correction of deficiencies in early youth, intensive instruction and habituation in a multitude of knowledges and practices in health matters, and a building of muscular power and stamina through physical activities and recreation, preferably out of doors. Such a program will create not only physical fitness, but a stability of mental attitudes and practices so notably lacking in our youth that it has been necessary to reject thousands of them from the armed forces.

Moreover, the figures on rejections indicate clearly that it is the defects in older age groups that make the rates of rejections so high. Among those recently from our schools the rejection rate is low. Among those over the age of thirty it is enormous. In other words, it seems clear that the attitudes and habits of the individual after leaving school are the most potent factors in his physical deterioration.

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EDITORIAL

Tuberculosis, which for many years has been a constantly diminishing menace, has again leaped to the forefront as an increasing problem in public health.

In most foreign countries the exigencies of war conditions have brought about a considerable increase in the incidence and death rate of tuberculosis. Even in those countries where most progress had been made, England, Wales, and Scotland, there has been a considerable increase. On the continent of Europe, particularly in those countries overrun by the Germans, who stole from them their food, clothing and medical services, and pressed their people into excessive slave labor under atrocious conditions, the increase in death rates has been enormous. These figures are presented elsewhere. Even in our own country there is considerable evidence that the death rate from tuberculosis, which had been beaten down to 42 per 100,000 in 1942, is no longer declining.

Particular stress, greater than in ordinary times, must be placed therefore on better conditions for children. Food, housing, and restriction of labor of children, all are essential. Any increase in this disease among the adult population is a direct menace to children since, in most cases, children contract tuberculosis from older people. The placing of all infectious cases in sanatoriums where they can no longer spread the disease to others is a fundamental. More intensive child and adult education as to the causes and means of control of this menace should be a major effort. Control of hours of labor, and of other industrial conditions is imperative. C.H.K.

A Christmas Tradition,—*By Emily P. Bissell*: The word "tradition" is defined by Webster as a custom that has prevailed, as from one generation to another. Truly, then, the annual Christmas Seal Sale of the National Tuberculosis Association and its affiliated branches is today a tradition.

I remember that when the first Christmas Seal Sale was launched in Wilmington, Del., in 1907, many people thought that financing tuberculosis work by the sale of little pieces of paper less than an inch square would prove in time "just another fad." I always had the greatest faith in its future. But, even to me, its originator in this country, its growth has been phenomenal. Throughout the years I have never been too much concerned about the amount of money to be raised. The goal of that first Christmas Seal Sale in Delaware was three hundred dollars. Three thousand dollars was raised. But that was not the greatest result of the campaign. I will never forget the message Jacob Riis sent me during that historic campaign. He said, "Every one who sees this stamp wants to know what it means. And when they want to know, the fight is won. It is because they do not know a few amazingly simple things that people die of tuberculosis."

Since its beginning, the Christmas Seal has kept faith with its contributors, and as long as it continues to do this, its success is assured. During the past few years, the Christmas Seal has had to meet another challenge, the possibility of a wartime increase in tuberculosis. Already we hear of tremendous gains in tuberculosis deaths in some of the warring countries. We in this country can thank our God that so far this health enemy, as old as war itself, is not getting the upper hand among our people. If this happy situation can be maintained, it will be a wonderful tribute to the organized fight against an enemy that has taken more lives through the ages than all the wars combined.

In 1907 our little group of workers was primarily interested in the saving of lives in our own community. But we soon realized that the Christmas Seal was too big an idea to keep in Delaware. Ten years ago I said the Christmas Seal "is the symbol of coming victory over an already half-conquered enemy." How happy I am to know that today the saving of lives continues in greater and greater numbers. But we must not forget that this enemy we have been fighting for so many years now has been rearmed by its greatest ally—WAR. The thousands of tuberculosis workers, doctors, nurses, public health officials, and the millions of contributing citizens must continue to join their forces against this insidious foe. None of us can afford to take a health vacation in these trying

times. This nation-wide group of efficient and interested people may be called upon for a world-wide vision in the post-war period —just as our little group of workers did in 1907.—*"A Christmas Tradition" by Emily P. Bissell for the National Tuberculosis Association.*

* * * * *

ABSTRACTS

"Keep Fit" Program,—The schools and colleges of America have contributed greatly to the health and fitness of young Americans, but even greater effort is needed if their contribution is to attain a level commensurate with their opportunities and responsibilities to their pupils and to their communities. The nation-wide popular impetus given physical fitness by the Joint Committee of the American Medical Association and the National Committee on Physical Fitness can help the schools and colleges to gain more public support for programs and facilities in health and physical education needed for the attainment of the high level of physical fitness desirable for American youth.

The following recommendations are proposed to help schools and colleges to define more clearly their responsibilities and to help them to attain these goals:

I. It is recommended that the following objectives be proposed to schools as minimum requirements of their programs in health and physical education—

1. Thorough physical examination of all children (a) on or before admission to school and at such regular intervals thereafter as may be deemed advisable; (b) on readmission to school following any major illness; (c) on teacher referral when the pupil's appearance, performance or routine screening test records suggests failing health or defects. Whenever possible the parent or teacher should attend the examination of younger children.
2. Daily teacher inspection of all pupils for signs of deviation from normal health status.
3. Routing screening tests to discover defects of vision and hearing and failure to grow.
4. At least annual, preferably semiannual, dental attention for every pupil.
5. An annual inventory of the physical abilities of every pupil by teachers of physical education.
6. Suitable follow-up work to assure (a) the correction of correctible defects and the prevention of preventable con-

ditions, and (b) the assignment of pupils to modified activities programs where this is needed.

7. The use of a cumulative record blank designed to follow the child throughout its school life and to record (a) the results of physical examinations, screening tests, and physical fitness inventories, and (b) the dates of major illnesses, immunizations, dental visits, and corrective measures taken.
8. Organized health instruction on all school levels and planned healthful living throughout the school experience. At elementary levels this may be undertaken as a part of larger projects. At secondary levels there is need, in addition, for instruction specifically devoted to this area. This should not be as a "rainy day" substitute for or otherwise at the expense of physical education. Irrespective of title or departmental affiliation such instruction must develop accurate knowledge, appropriate attitudes, and sound habits aimed to further individual and community health. This demands at least a semester course of organized health instruction on the junior high school level and a semester or year course on the senior high school level, equivalent in length and regulations to other standard courses, to be required of all students. These courses should be taught by adequately prepared teachers and for a requirement for graduation.
9. At the elementary level at least 40 minutes daily, exclusive of recess periods devoted to planned physical education activities suited to the grade level involved.
10. At the secondary level (grades 7 to 12) a daily period of vigorous physical education. This period should be at least as long as the regulation class period, and be scheduled within the school day. Pupils should be classified in respect to sex and grade, ability or special needs. Standards should be set for passing the course in all grades, and acceptable performance required for promotion and graduation.
11. Expert supervision and direction at local and state levels as for other fields. In some instances the training of a person may qualify him to supervise both health and physical education.
12. The strengthening and extending of advisory and consultative services of the U. S. Office of Education in these areas.

Further school efforts to improve physical fitness of youth could wisely be directed toward (1) extension of health inventory and correction of defects in the pre-school years; (2) insuring sound mental health; (3) improvement of child nutrition through the provision of adequate school lunches; (4) provision of camping and other extended school services contributing to health; (5) systematic cooperation with all community health efforts such as tuberculosis case finding, venereal disease control, and maternal and child health clinics.

II. It is recommended that teacher training institutions be urged to include in their program for training teachers, instruction and practice in the daily observation of children for the purposes of detecting signs indicating possible deviations from normal health and development.

III. It is recommended that professional training institutions be urged to revise if necessary their programs for the training of teachers of health and physical education and of recreation leaders to give special consideration to promotion of health and physical fitness.

IV. It is recommended that teacher training institutions be urged to give some training in the conduct of physical fitness activities to all prospective teachers.

V. It is recommended that plans be perfected for giving special consideration to post-war planning of school facilities toward better provision for coordinated school and community health and physical education programs and for extended community use of school facilities. A Suggested "Keep Fit" Program for Schools and Colleges of America by The Joint Committee on Physical Fitness of the National Committee on Physical Fitness and the American Medical Association.

* * * * *

Ultraviolet Disinfecting Lamps, — The Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association met in Chicago, March 8 and 9, 1944. Among other matters, the Committee had called to its attention the question of "Ultraviolet Disinfecting Lamps."

"Recently public school officials have been encouraged by salesmen to install ultraviolet lamps in schoolrooms, the purpose of which is to sterilize the air.

Since laboratory findings differ widely from the results obtained in actual practice, an explanation is in order. Frankly, the Council on Physical Therapy of the American Medical Association does not accept ultraviolet lamps for which claims are made that

they will prevent cross-infection in schoolrooms or disinfect solids.

"On the one hand, clinical evidence submitted to the Council shows that under properly controlled conditions ultraviolet rays may supplement other methods of disinfecting air for prevention of cross infection in contagious wards, in nurseries and for reducing air borne infection of wounds in hospital operating rooms. Council acceptance of ultraviolet disinfecting lamps is limited to installations in hospital nurseries, hospital wards and operating rooms.

"On the other hand, satisfactory evidence is not available to warrant acceptance of ultraviolet lamps for disinfecting solids. To kill a microorganism a direct hit by ultraviolet rays of sufficient intensity is required. This is difficult to accomplish on the edge of a drinking cup, for example, also in a liquid containing suspended matter or in air laden with dust particles that shield the organism. Ultraviolet radiation cannot penetrate deeply and hence may be absorbed by finger marks, saliva, cosmetics or other foreign matter on a drinking cup. In view of the present available evidence, ultraviolet radiation appears to be an uncertain means of sterilizing solid objects (drinking cups, combs, brushes, shaving utensils, toilet seats and shoes) even if irridiation of the whole surface is possible. Ultraviolet lamps are not accepted for disinfecting air in schools, waiting rooms, public gathering places and large halls. The evidence now available does not indicate that the incidence of colds can be reduced by the installation of ultraviolet lamps and by the irradiation of an enclosure occupied by people.

"It must be remembered that injurious physiologic effects may arise from prolonged ultraviolet irradiation of a person. Overdoses of ultraviolet rays will produce conjunctivitis (an irritation of the eyes) and a serious erythema (painful sunburn). Since the occupants of the room must be shielded from the rays, the space containing the highest concentration of infectious micro-organisms is not irradiated. Those droplets laden with bacteria and emitted by the infected person are distributed so that they are freely inhaled by a recipient long before the natural or artificial flow of air will carry the droplets to the irradiated spaces. It follows, therefore, that disinfecting lamps are of little or no value in preventing cross-infection in schoolrooms."— Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association.

* * * * *

Tuberculosis in Schools, — The Legislative Assembly of the Province of Quebec on May 17, 1941 unanimously passed an act stating that no person could teach in a public, private or independent school unless he produces every year a physician's certificate

stating that he "suffers from no infirmity or disease which renders him unfit for teaching" and "a certificate from a phthisiologist attesting that a clinical and radiological pulmonary examination shows that such person is free from tuberculous disease." Such examination must be made within two months following the engagement. Should any teacher prove to be tuberculous the contract to teach is immediately rescinded.

Three factors led to the passage of the law. First, a three-year educational campaign on tuberculosis which reached most of the population; second, a law passed by the city of Quebec requiring all teachers of the School Commission to undergo examination for tuberculosis, including a chest X-ray. Out of 523 teachers examined 16 were withdrawn from teaching because of active or chronic tuberculosis. The third factor was a personal experience published in an educational review which demonstrated mass contamination of pupils by a tuberculous teacher.

The legislation was introduced by the Council of Education of which all the bishops of the Province are members, so the doors of the teaching religious congregations were thrown open.

Difficulties arose in the enforcement of this new law as was to be expected, but these were overcome as the organization proceeded. In rural districts the expense was borne by the Board of Health, in Montreal the Catholic and Protestant school commissions paid for the X-ray films.

Apparently tuberculosis was twice as prevalent among religious teachers as it was among the lay teachers, even though most of the religious congregations have required, for the past few years, an X-ray examination of the chest from all applicants for admission to their groups.

Percentages rejected were: For lay group—women, 0.9; men, 0.9. Religious group—women, 1.9; men, 1.3. — Detection of Tuberculosis in School Teachers in the Province of Quebec, L. Laberge, M.D., Canadian Journal of Public Health, March, 1943. Abstracted from Tuberculosis Abstracts, Sept., 1944.

* * * * *

Tuberculosis in New Jersey Schools,—During August 1939, an act passed by the Senate and General Assembly of New Jersey provided that the board of education of every school district should periodically determine the presence or absence of active tuberculosis in any or all pupils in public schools. The rules and regulations for complying with this were to be made by the State Board of Education. Any pupil found with active tuberculosis was to be excluded from school until the disease was no longer communicable. Employees (which includes teachers) of boards of education were

required to have a physical examination by the provisions of a similar act passed at the same time. The State Board of Education was to determine the scope of such an examination.

The State Board of Education on May 11, 1940 ruled that all pupils of grades nine, ten, eleven and twelve and all special students enrolled in high school should be listed or examined annually, as early as possible in each school year. For employees, the Board ruled that the examination was to be limited to determination of the presence or absence of tuberculosis.

This legislation was the climax of a long term program of health education in homes, schools and community groups in New Jersey. Parents, children and school personnel were ready for the step when it was taken so there was no serious opposition in any county. The examinations themselves were used as an educational demonstration and great care was used to prepare pupils for them. It is now recommended that discussion with pupils should follow the testing. Answering students' questions and explaining the results in classrooms or individually will do much to give the procedure meaning.

X-ray examinations of the students who were positive reactors, and of a few students who were not tuberculin tested, revealed 343 cases of reinfection type tuberculosis, or approximately 2 per 1,000. Of the 2,772 teachers examined, 67 or 2.4 per cent had reinfection tuberculosis. Of these, 31 were classified as stable.

Reports on the disposition of reinfection type tuberculosis were incomplete. However, 23 cases were hospitalized, 21 cases excluded from schools, 2 deaths shortly after examination and 40 students and employees permitted to return to school under medical supervision with periodic X-rays.

Out of 195,130 students in New Jersey schools during 1941-42, 19.9 per cent were positive reactors to the tuberculin test. Of 59,736 who were tested for the first time, 13.8 per cent were positive reactors. Retests of 99,964 students who were negative reactors in previous years yielded 10.7 per cent positive reactors. This group is highly significant from the standpoint of epidemiological control. Its members have been recently in contact with an infection source. The prevailing infection rate in the school population therefore is slightly less than 20 per cent. Among teacher and employee groups 39.7 per cent were positive reactors. Other significant chest, heart and orthopedic conditions were revealed by the school tuberculin testing and X-raying program.
—Tuberculosis Control in the Schools of New Jersey, Compiled by the N. J. Tuberculosis League, cooperating with the State Dept. of Pub. Instr., January, 1944. From Tuberculosis Abstracts, September, 1944.

NOTES

Health Clinic,—Seventeen physicians and medical specialists conducted the annual health clinic at Colby Junior College, New London, New Hampshire, October 21, 1944. Coming from Boston and medical centers in New Hampshire and Vermont, the doctors examined the 190 entering students and reviewed the case of returning students whose previous health records have not been perfect.

An entire dormitory is taken over by the clinic, with rooms designated for the various examinations—eye, ear, abdomen, and chest—and for orthopedic and conference work. Serving as the basis for the clinical work are the record presented by a student's family physician and results of the College's preliminary examination covering chest x-ray, haemoglobin test, heart rate, blood pressure, Wasserman test, urinalysis, blood analysis, and audiometric reading.

Following her examination each student meets with one of the conference physicians to clear any questions and to determine her health program for the year. Where necessary, appointments are made at neighboring clinics and hospitals for psychiatric treatment and dental work. In preparation for the clinic, three medical technicians—graduates of Colby—have worked at the New London Hospital for two days to analyse specimens and to complete Wasserman tests.

Undergraduates in the medical technician and medical secretarial courses receive practical experience at the clinic in making records and otherwise assisting the doctors. In addition to its purpose in preventing disease and discovering physical weaknesses, the clinic is considered an effective educational measure in that it familiarizes students with complete, efficient, and modern medical methods and, through the personal doctor-student conference, gives them an opportunity to gain the maximum knowledge from the experience. The estimated expense to the College for the one-day clinic is approximately $2,000.

The College stresses the importance of student, faculty, and staff health throughout the year. Faculty, housekeepers, and groundsmen are required to pass a complete physical examination at least every three years, while food handlers must undergo an annual examination that is thorough in every respect and designed to discover carriers of infection. A daily clinic is held every morning for students to check on slight illnesses and to segregate immediately those who need hospitalization in the College infirmary.

* * * * *

The Threat of the Undereducated, — Sufficient education, so that the voter can weigh the fundamental problems involving government, is essential if democracy is to be a permanent success. This is the conclusion of the National Commission for the Defense of Democracy through Education, appointed by the National Education Association of the United States.

Half of the voters have not finished the eighth grade, yet it is after the eighth grade that study of history, economics, and civics is begun—the earlier years are almost literally a study of the three R's. Of voters 25 years and over, less than one-twentieth are college graduates; and less than one-fourth have graduated from high school.

Even so, education has made great strides since the last war. In 1917 forty-one per cent of the soldiers in the army had not completed the seventh grade. In 1942 sixty per cent had completed second year high school, and forty per cent were high school graduates.

The effect of neglecting education during wartime does not stop with the end of the war. There is a sharp decrease of enrollment in teachers' colleges and, as most teacher-training courses are four years in length, it is expected that the shortage of new and adequately trained teachers will continue for a number of years. The effects of the present teacher shortage, and of the wartime tendency for older students to leave school prematurely, are especially serious in the light of the following comparisons.

There are more inmates of prisons, mental institutions, and alms houses than there are students in colleges and universities.

There are almost two and one-half times as many adults who never went to school at all as there are students in colleges and universities.

There are nearly three times as many adult "functional illiterates" (fourth grade or less) as there are adults who have completed college.